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(54) Local area network for digital data processing system.

(57) A local area network for interconnecting terminals and other users and data processing systems and other service providers over a communications link. The users and providers connect to the communications link by means of interface units each of which may connect to several users or providers. The interface units communicate over the communications link by means of messages. When a user requires the use of a service, the interface unit establishes a virtual circuit between it and the interface unit connected to the service provider and a service session which allows the user and the service provider to communicate over the virtual circuit. If several users connected to the one interface unit as the first user require services provided by providers which connected to the same interface unit as the first provider, they communicate in sessions over the same virtual circuits. The sessions messages are accumulated into single virtual circuit messages that are acknowledged in unison by the receiving interface unit. Each virtual circuit in the users' interface units includes a timer which reset when a message is transmitted over the virtual circuit and a data waiting flag set whenever data is present to be transmitted over the virtual circuit. The interface units are inhibited from transmitting over a virtual circuit unless the timer has timed out and the data waiting flag is set.

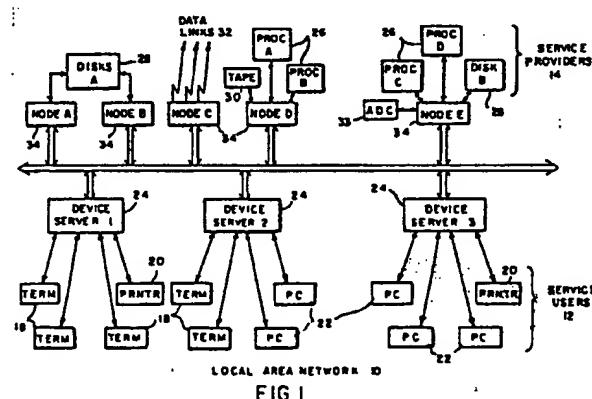


FIG. 1

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